REMARKS

Claims 60-64 are cancelled. Claims 65-85 are added are the only claims pending in the application.

New claims 65-85 do not add "new matter" since each is supported by the specification. Claim 65 is supported by the specification, for example, at page 2, line 9-13, and page 5, line 19-22. Claims 66-67 and 69-72 are supported by the specification at, for example, the table at page 10; Fig 1; and page 13, lines 8-10. Claim 68 is supported by the specification at, for example, page 11, lines 5-19; and page 13, line 8-10. Claim 73 is supported by the specification at, for example, page 2, line 9-13, and page 6, lines 16-19.

Claims 74-85 are each supported by the specification at, for example, the table on page 10; and page 13, lines 3-10. Claims 76 and 85 are additionally supported by the specification at, for example, page 5, lines 19-22. Claims 80 and 84 are additionally supported by the specification at, for example, page 8, lines 18-21.

Claims 65-85 are believed allowable. Applicant respectfully requests substantive Examination of claims 65-85.

Respectfully submitted,

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Inventor ..... V. Segal
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Examiner ..... H. Wilkins III
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Title: Sputtering Targets Formed From Cast Materials

VERSION WITH MARKINGS TO SHOW CHANGES MADE ACCOMPANYING RESPONSE TO MARCH 6, 2001 OFFICE ACTION

In the Claims

The claims have been amended as follows. Underlines indicate insertions and ~~strikeouts~~ indicate deletions.

65. (New) A physical vapor deposition target comprising an alloy of copper and silver, the silver being present in the alloy at from less than 1.0 at% to 0.001 at%, the alloy having a substantially uniform microstructure and a fine grain size.

66. (New) The physical vapor deposition target of claim 65 wherein the grain size is less than or equal to about 20 micrometers.

67. (New) The physical vapor deposition target of claim 66 wherein the grain size is about 20 micrometers.

68. (New) A physical vapor deposition target comprising an alloy of copper and silver, the silver being present as uniformly distributed fine precipitates in the alloy microstructure and being present in the alloy at from less than 1.0 at% to 0.001 at%.

69. (New) The physical vapor deposition target of claim 68 wherein the alloy has a resistivity of from about 1.7 microohms.cm to about 1.82 microohms.cm.

70. (New) The physical vapor deposition target of claim 68 wherein the grain size is less than or equal to about 20 micrometers.

71. (New) A physical vapor deposition target comprising an alloy of copper and silver having a grain size of less than or equal to about 20 micrometers, the silver being present in the alloy at from less than 1.0 at% to 0.001 at%.

72. (New) The physical vapor deposition target of claim 71 wherein the grain size is about 20 micrometers.

73. (New) A physical vapor deposition target comprising an alloy of copper and silver, the silver being present in the alloy at from 50 at% to 70 at%, the alloy having a substantially uniform microstructure and a fine grain size.

74. (New) A physical vapor deposition target comprising copper and having an average grain size of less than or equal to about 30 micrometers.

75. (New) The physical vapor deposition target of claim 74 further comprising silver.

76. (New) The physical vapor deposition target of claim 75 wherein the silver is present at from less than 1.0 at% to 0.001 at%.

77. (New) The physical vapor deposition target of claim 75 wherein the average grain size is less than or equal to about 20 micrometers.

78. (New) The physical vapor deposition target of claim 74 further comprising tin.

79. (New) The physical vapor deposition target of claim 78 wherein the average grain size is less than or equal to about 20 micrometers.

80. (New) The physical vapor deposition target of claim 78 wherein the tin is present at from less than 1.0 at% to 0.001 at%.

81. (New) A physical vapor deposition target comprising a copper material having at least one element selected from the group consisting of silver and tin and having an electrical resistivity of from about 1.7 microohms.cm to about 1.82 microohms.cm.

82. (New) The physical vapor deposition target of claim 81 wherein the resistivity is less than about 1.8 microohm.cm.

83. (New) The physical vapor deposition target of claim 81 wherein the copper material comprises an average grain size of less than about 30 micrometers.

84. (New) The physical vapor deposition target of claim 81 wherein the at least one element is tin, the tin being present in the copper material at from less than 1.0 at% to 0.001 at%.

85. (New) The physical vapor deposition target of claim 81 wherein the at least one element is silver, the silver being present in the copper material at from less than 1.0 at% to 0.001 at%.